

October 3, 2007

Dear Judge Fenner:

1. Our sole intent has been to verify exactly how Dr. Gur's graph of PET scan findings demonstrating a difference between Lisa Montgomery and the Control Subjects were produced. This is the entire issue for assessing if Dr. Gur's method of concluding that the defendant's brain metabolism is different from healthy controls. If the method is not valid, then no conclusions can be meaningfully drawn from the findings.
2. We stated repeatedly in writing and in our court testimony that in order to verify the data presented in Figure 4 of his report, we needed the raw count/pixel for each of the examined 36 regions and the Whole Brain Value for each of the 23 controls and the defendant
3. Since you ordered Dr. Gur to produce this data for us, we have been repeatedly sent non-relevant data, including multiple mailings of the already calculated ratios, data from other control subjects scanned on a different camera, regions not in the Figure, etc.
4. We repeatedly stated that in order to verify the method, we needed the components making up these ratios, item 2 above.
5. Finally, on Sept 19, 15 days after being so ordered, we received what we thought was the requested data, in the form of an unlabelled text file. We were told in writing by Dr. Gur that the last item for each subject was in fact the needed Whole Brain Value for the 23 control subjects. .
6. We calculated our graphs to verify Dr. Gur's analyses accordingly and submitted a supplemental report on Sept 20. We were able to reproduce the graph for Lisa Montgomery. The findings for the Controls were different using Dr. Gur's stated method. This was the basis for our conclusions that the methods used for Fig 4 of Dr. Gur's report appeared to be invalid.
7. It now appears, based on the latest letter from Dr. Gur dated Oct 2, that in fact he has never sent us the required data to allow us to verify his methods. The Data sent on Sept 19 actually did not contain the WB values as stated in his accompanying email on that date. Dr. Gur states in the second to last paragraph of his October 2 letter that  
  
*"As you know, our PET Center is **still working on** producing the original count-rate values that were used by the PET Center for calculating the R/WB values shown in Figure 4 of my first report."*
8. Lastly, we have received 3 different versions of the Figure (original 7/31/07, amended 8/23/07, supplement 9/30/07, statement 10/2/07). The same issue remains: What exact data was used to calculate these various versions of the Region/WB ratios. Without the data itself, it is inappropriate in such a proceeding to take Dr. Gur's repeated statements as to what he did, when he cannot or will not produced the raw data that is generating the various permutations of the findings. He states in paragraph 4 that:

*"In my original report I showed Ms. Montgomery's values and the values of the control sample calculated in EXACTLY the same way: The counts-per-pixel (cpp)*

*values for each ROI were divided by the same value (cpp) for the whole-brain. These were the values that were supplied to me by our PET Center for the healthy control sample and for Ms. Montgomery. When Evans and Mayberg asked for the metabolic rates of all individual subjects in the control sample, I re-calculated the R/WB values based on these metabolic rates, which were in physiologic units (ml/100g of tissue/minute) rather than the cpp values."*

9. Again, The data for the WB however it was calculated either physiological units or cpp values has never been produced and therefore his statements of what he did cannot be verified.

10. A side issue at this point, although the focus of Dr. Gur's October 2 report, is our use of the average of the 36 or 35 regions to illustrate what happens when you mix normalization methods. Our use of this method was not to endorse it. Rather it was to emphasize the critical importance of verifying just how the two sets of data (the defendant and the controls) were normalized, as it has tremendous impact on the final results.

11. At the end of the day, the method used to determine that Lisa Montgomery has abnormal brain metabolism cannot be verified. Any conclusion that Lisa Montgomery has an abnormal brain scan that supports a behavioral or disease diagnosis cannot be substantiated.

Sincerely,

Helen Mayberg MD